

# Exhibit 1

**COUNT ONE**

**S EVENTH COUNTERCLAIM**

**(Infringement of U.S. Patent No. 7,348,604)**

96. ~~40.~~ Signify incorporates by reference the allegations set forth in the preceding paragraphs as though fully set forth herein.

97. ~~41.~~ On information and belief, ~~Defendant~~ Satco has infringed and is infringing claims of the '604 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products including, but not limited to the

S9380, S9381, S9382, S9383, S9384, S9385, S9386, S9387, S9388, S9389, S29750, and/or other products with substantially similar features (collectively, the “’604 Accused Products”).

98. ~~42.~~ Claim 1 of the ’604 Patent recites:

1. A light-emitting module comprising:

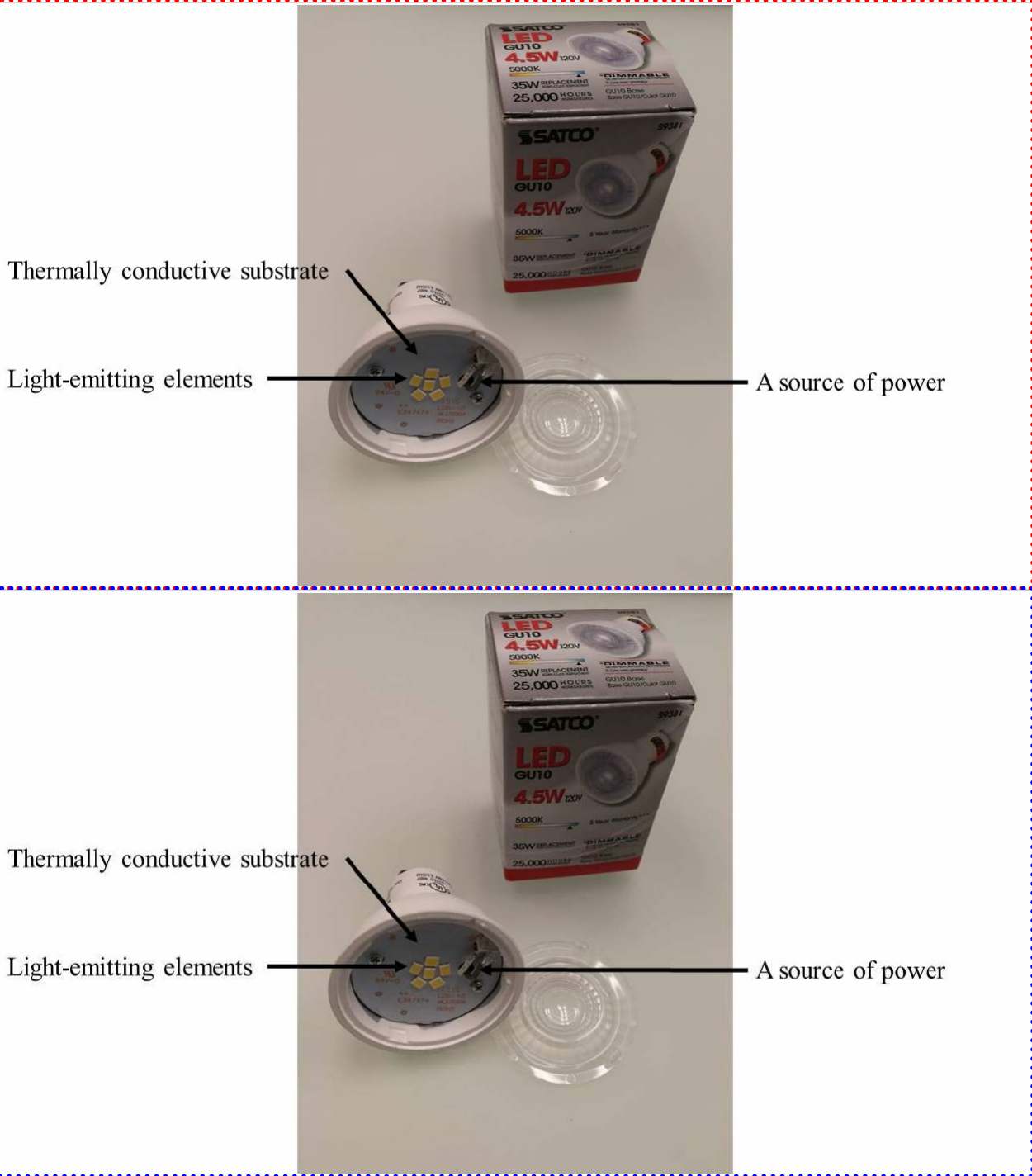
- (a) a thermally conductive substrate having one or more light-emitting elements thermally connected thereto, the substrate configured to operatively couple a source of power to the one or more light-emitting elements, thereby providing a means for activation of the one or more light-emitting elements;
- (b) a heat dissipation element thermally coupled to the thermally conductive substrate; and
- (c) a housing element including fastening means for detachably coupling the housing element to the heat dissipation element, said substrate being enclosed between the heat dissipation element and said housing element, said housing element including a transparent region enabling transmission of light emitted by the one or more light-emitting elements therethrough.

99. ~~43.~~ On information and belief, the S9381 is a light-emitting module. For example, this limitation is shown below.





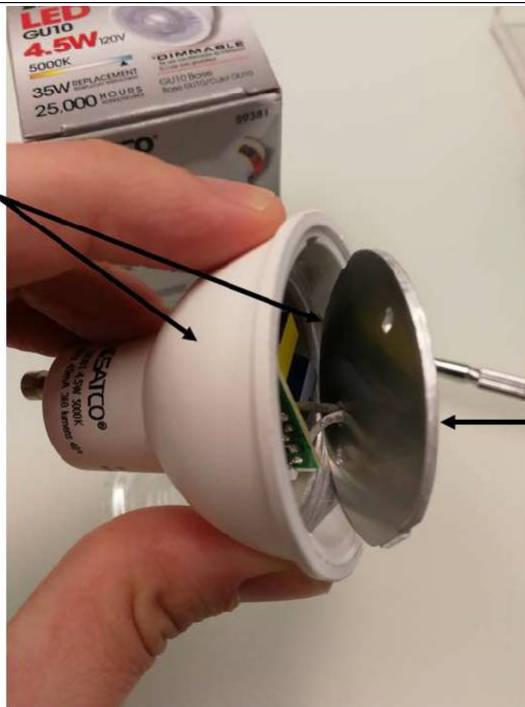
100. ~~44.~~ On information and belief, the S9381 comprises a thermally conductive substrate having one or more light-emitting elements thermally connected thereto, the substrate configured to operatively couple a source of power to the one or more light-emitting elements, thereby providing a means for activation of the one or more light-emitting elements. For example, this limitation is shown below.



101. ~~45.~~ On information and belief, the S9381 comprises a heat dissipation element

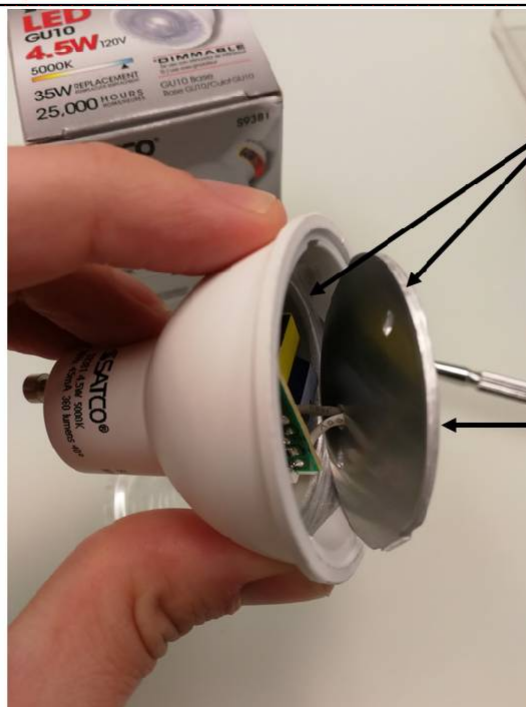
thermally coupled to the thermally conductive substrate. For example, this limitation is shown below.

Heat dissipation element



Thermally conductive substrate

Heat dissipation element



Thermally conductive substrate

102. ~~46.~~ On information and belief, the S9381 comprises a housing element including fastening means for detachably coupling the housing element to the heat dissipation element, said substrate being enclosed between the heat dissipation element and said housing element, said housing element including a transparent region enabling transmission of light emitted by the one or more light-emitting elements therethrough. For example, this limitation is shown below.

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Thermally conductive substrate  
 Light-emitting elements  
 Fastening means  
 Housing element



Thermally conductive substrate  
 Light-emitting elements  
 Fastening means  
 Housing element



103. ~~47.~~ The full extent of **Defendant** [Satco](#)'s infringement is not presently known to Signify. On information and belief, **Defendant** [Satco](#) has made and sold, or will make and sell, products under different names or part numbers that infringe the '604 Patent in a similar manner. Signify makes this preliminary identification of infringing products and infringed claims without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained

through discovery or otherwise. Signify will identify each claim of the '604 Patent that is infringed and each product that Signify is aware of that infringes the '604 Patent in accordance with the Local Patent Rules.

104. ~~48.~~ On information and belief, ~~Defendant~~ Satco has been aware of and has had notice of the '604 Patent and its infringement of the '604 Patent at least as early as ~~the service of this Complaint.~~ November 4, 2019.

105. ~~49.~~ On information and belief, by continuing to make, use, sell, offer to sell, and/or import the '604 Accused Products on or after ~~Defendant~~ Satco first had notice of Signify's allegations of

infringement, **Defendant Satco** indirectly infringes and continues to indirectly infringe at least claim 1 of the '604 Patent by active inducement under 35 U.S.C. § 271(b). **Defendant Satco** has done so by acts including but not limited to (1) selling such products including features that—when used or resold—infringe, either literally or under the doctrine of equivalents, the '604 Patent; (2) marketing the infringing capabilities of such products; and (3) providing instructions, technical support, and other support and encouragement for the infringing use of such products. Such conduct by **Defendant Satco** was intended to and results in direct infringement by **Defendant Satco**'s direct and indirect customers, including the making, using, selling, offering for sale and/or importation of the '604 Accused Products in the United States. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '604 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '604 Patent.

106. ~~50.~~ On information and belief, by continuing to make, use, sell, offer to sell and/or import the '604 Accused Products on or after **Defendant Satco** first had notice of Signify's allegations of infringement, **Defendant Satco** indirectly infringes and continues to indirectly infringe at least claim 1 of the '604 Patent by contributorily infringing under 35 U.S.C. § 271(c). **Defendant Satco**'s affirmative acts of manufacturing, selling, offering for sale, and/or importing the '604 Accused Products, in this District and elsewhere in the United States, contribute to **Defendant Satco**'s customers and end-users directly infringing of the '604 Accused Products. The '604 Accused Products are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by **Defendant Satco** to be especially made or especially adapted for use in infringement of the '604 Patent. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '604 Patent and with intent, or willful blindness, that they cause the direct infringement of the '604 Patent.

107. ~~51.~~ On information and belief, Signify has suffered and continues to suffer damages as a result of ~~Defendant~~Satco's infringement of the '604 Patent in an amount to be determined at trial.

108. ~~52.~~ On information and belief, ~~Defendant~~Satco's infringement of the '604 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless ~~Defendant~~Satco is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '604 Patent.

109. ~~53.~~ On information and belief, ~~Defendant~~Satco has continued with its infringement despite the objectively high likelihood that its actions constitute infringement and ~~Defendant~~Satco's subjective knowledge of this obvious risk. As ~~Defendant~~Satco has no good faith belief that it does not infringe the '604 Patent, at least ~~Defendant~~Satco's continued infringement of the '604 Patent is willful and deliberate, entitling Signify to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

~~COUNT TWO~~  
EIGHTH COUNTERCLAIM

**(Infringement of U.S. Patent No. 7,358,929)**

110. ~~54.~~ Signify incorporates by reference the allegations set forth in the preceding paragraphs as though fully set forth herein.

111. ~~55.~~ On information and belief, ~~Defendant~~Satco has infringed and is infringing claims of the '929 Patent, including at least claim 17, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products, including, but not limited to the S29341, Nuvo 65-333, Nuvo 65-333R1, Nuvo 65-318, and/or other products with substantially similar features (collectively, the "'929 Accused Products").

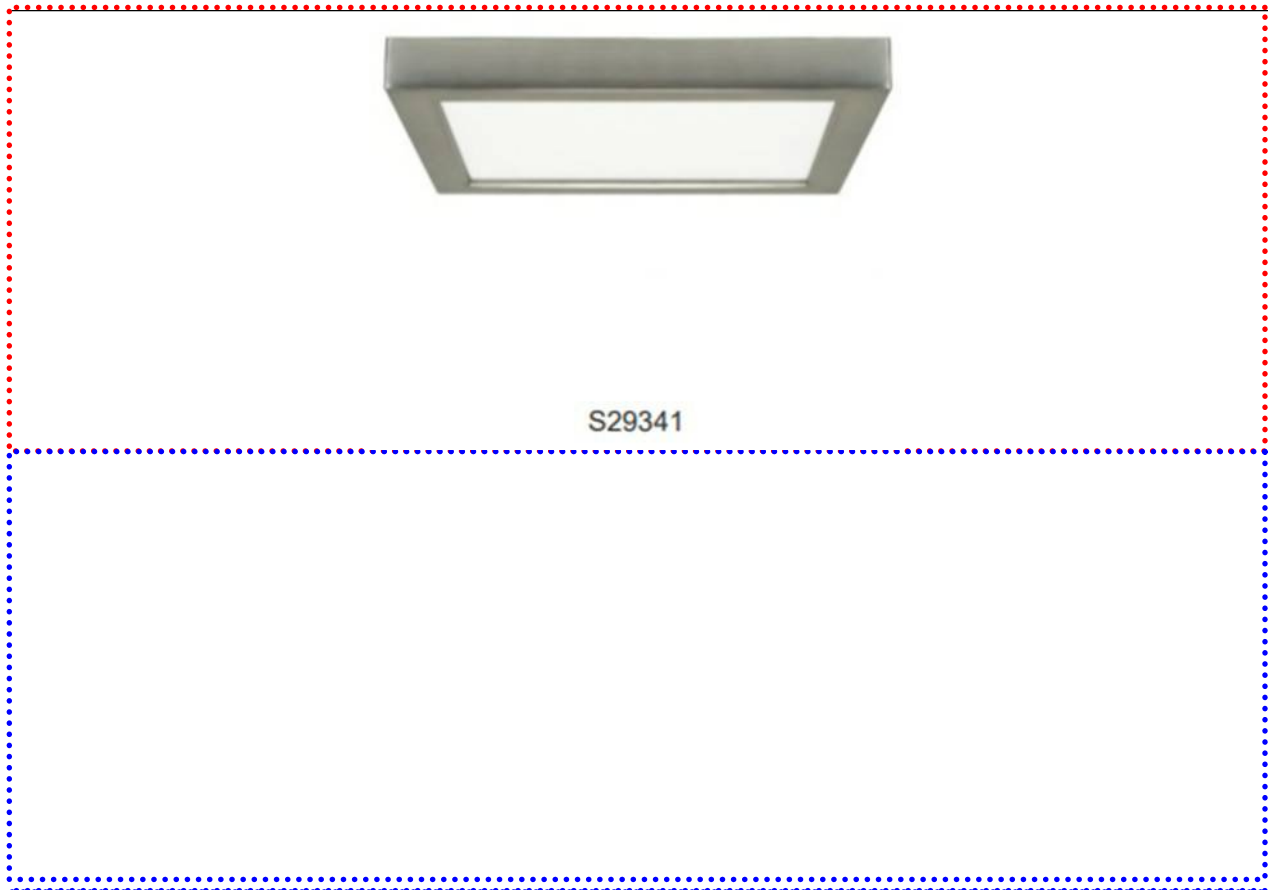
112. ~~56.~~ Claim 17 of the '929 Patent recites:

17. A tile light, comprising:

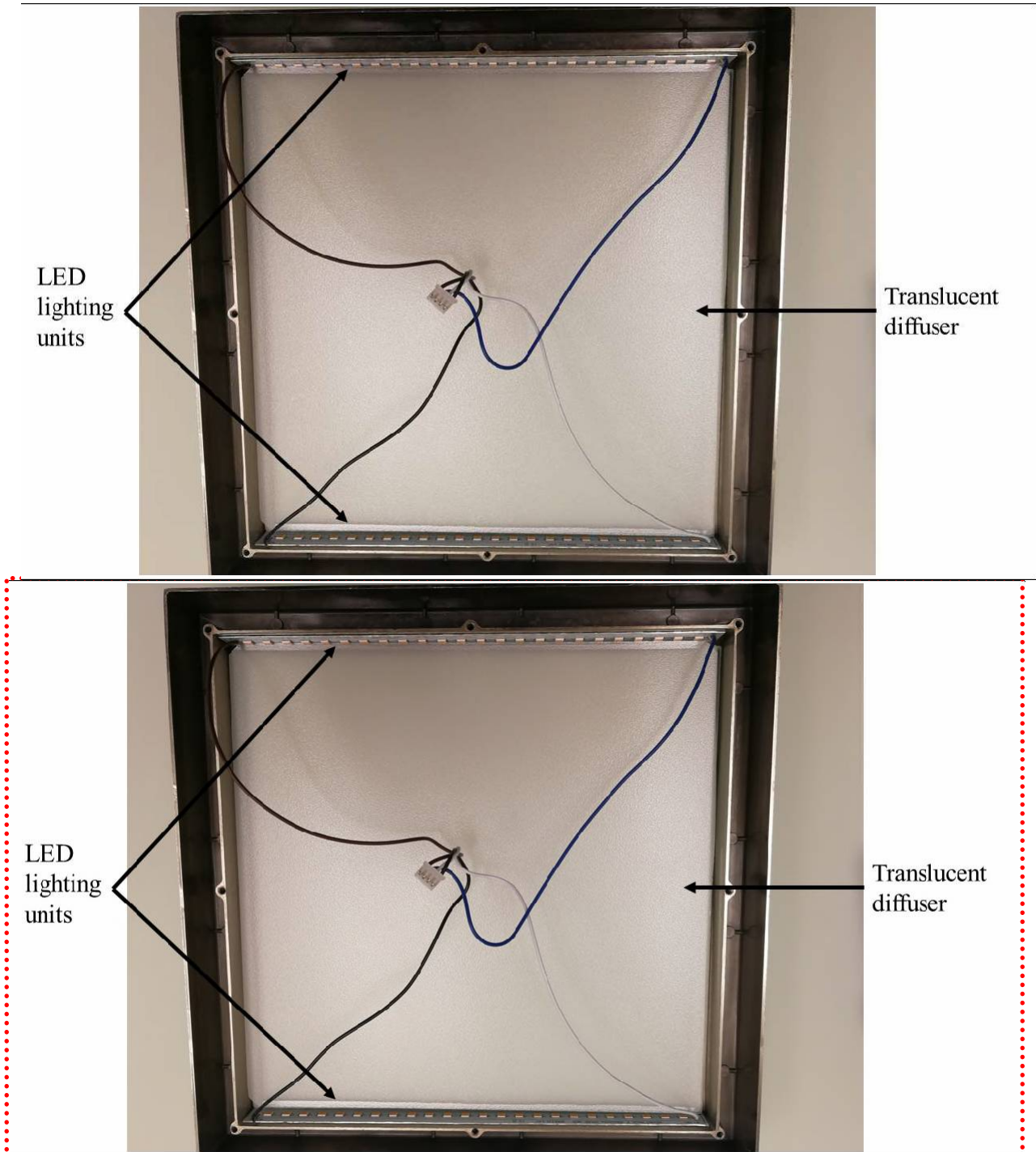
a plurality of LED lighting units disposed only about a perimeter of a substantially rectangular housing; and

a substantially translucent diffuser disposed over the housing for receiving and diffusing light from the lighting units.

113. ~~57.~~ On information and belief, the S29341 is a tile light. For example, this limitation is shown below.



114. ~~58.~~ On information and belief, the S29341 contains a plurality of LED lighting units disposed only about a perimeter of a substantially rectangular housing, and a substantially translucent diffuser disposed over the housing for receiving and diffusing light from the lighting units. For example, this limitation is shown below.



115. ~~59.~~ The full extent of **Defendant**[Satco](#)'s infringement is not presently known to Signify. On information and belief, **Defendant**[Satco](#) has made and sold, or will make and sell, products under different names or part numbers that infringe the '929 Patent in a similar manner. Signify makes this preliminary identification of infringing products and infringed claims without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained

through discovery or otherwise. Signify will identify each claim of the '929 Patent that is infringed and each product that Signify is aware of that infringes the '929 Patent in accordance with the Local Patent Rules.

116. ~~60.~~ On information and belief, ~~Defendant~~Satco has been aware of and has had notice of the '929 Patent and its infringement of the '929 Patent at least as early as ~~the service of this Complaint.~~November 4, 2019.

117. ~~61.~~ On information and belief, by continuing to make, use, sell, offer to sell, and/or import the '929 Accused Products on or after ~~Defendant~~Satco first had notice of Signify's allegations of

infringement, **Defendant Satco** indirectly infringes and continues to indirectly infringe at least claim 17 of the '929 Patent by active inducement under 35 U.S.C. § 271(b). **Defendant Satco** has done so by acts including but not limited to (1) selling such products including features that—when used or resold—infringe, either literally or under the doctrine of equivalents, the '929 Patent; (2) marketing the infringing capabilities of such products; and (3) providing instructions, technical support, and other support and encouragement for the infringing use of such products. Such conduct by **Defendant Satco** was intended to and results in direct infringement by **Defendant Satco**'s direct and indirect customers, including the making, using, selling, offering for sale and/or importation of the '929 Accused Products in the United States. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '929 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '929 Patent.

118. ~~62.~~ On information and belief, by continuing to make, use, sell, offer to sell, and/or import the '929 Accused Products on or after **Defendant Satco** first had notice of Signify's allegations of infringement, **Defendant Satco** indirectly infringes and continues to indirectly infringe at least claim 17 of the '929 Patent by contributorily infringing under 35 U.S.C. § 271(c). **Defendant Satco**'s affirmative acts of manufacturing, selling, offering for sale, and/or importing the '929 Accused Products, in this District and elsewhere in the United States, contribute to **Defendant Satco**'s customers and end-users directly infringing of the '929 Accused Products. The '929 Accused Products are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by **Defendant Satco** to be especially made or especially adapted for use in infringement of the '929 Patent. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '929 Patent and with intent, or willful blindness, that they cause the direct infringement of the '929 Patent.



119. ~~63.~~ On information and belief, Signify has suffered and continues to suffer damages as a result of ~~Defendant~~Satco's infringement of the '929 Patent in an amount to be determined at trial.

120. ~~64.~~ On information and belief, ~~Defendant~~Satco's infringement of the '929 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless ~~Defendant~~Satco is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '929 Patent.

121. ~~65.~~ On information and belief, ~~Defendant~~Satco has continued with its infringement despite the objectively high likelihood that its actions constitute infringement and ~~Defendant~~Satco's subjective knowledge of this obvious risk. As ~~Defendant~~Satco has no good faith belief that it does not infringe the '929 Patent, at least ~~Defendant~~Satco's continued infringement of the '929 Patent is willful and deliberate, entitling Signify to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**COUNT THREE**  
**NINTH COUNTERCLAIM**

**(Infringement of U.S. Patent No. 6,972,525)**

122. ~~66.~~ Signify incorporates by reference the allegations set forth in the preceding paragraphs as though fully set forth herein.

123. ~~67.~~ On information and belief, ~~Defendant~~Satco has infringed and is infringing claims of the '525 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products, including, but not limited to the S29011, S29056, Nuvo 65-121, Nuvo 65-305, and Nuvo 65-318, and/or other products with substantially similar circuitry (collectively, the "'525 Accused Products").

124. ~~68.~~ Claim 1 of the '525 Patent recites:

1. A switching arrangement for operating at least one LED, which

input terminals for connecting a supply source,

output terminals for connecting the LED to be operated,

a first series circuit between one of the input terminals and one of the output terminals including at least a self-inductance, a capacitor and a diode,

a second series circuit between the input terminals, including at least said self-inductance and a switching element which is alternatively switched to a conducting state and a non-conducting state at high frequency,

a third series circuit between the output terminals, including at least said diode and an inductive winding,

characterized in that the inductive winding forms a secondary winding of a transformer which has a primary winding which forms part of both the first and the second series circuits.

125. ~~69.~~ On information and belief, the S29011 contains a switching arrangement for operating at least one LED, which switching arrangement is provided with the limitations discussed below, as shown for example in the schematics of Exhibit 8.11.

126. ~~70.~~ On information and belief, the S29011 contains input terminals for connecting a supply source. For example, as shown in Exhibit 8.11 the S29011 contains input terminals (*e.g.*, AC MAINS INPUT).

127. ~~71.~~ On information and belief, the S29011 contains output terminals for connecting the LED to be operated. For example, as shown in Exhibit 8.11 the S29011 contains output terminals (*e.g.*, OUTPUT WIRE CONNECTOR) for connecting the LED to be operated.

128. ~~72.~~ On information and belief, the S29011 contains a first series circuit between one of the input terminals and one of the output terminals including at least a self-inductance, a capacitor and a diode. For example, as shown in Exhibit 8.11 the S29011 contains a first series circuit between one of the input terminals (*e.g.*, AC MAINS INPUT) and one of the output terminals (*e.g.*,

OUTPUT WIRE CONNECTOR) including at least a self-inductance (*e.g.*, L1) a capacitor (*e.g.*, CY2) and a diode (*e.g.*, D3).

129. ~~73.~~ On information and belief, the S29011 contains a second series circuit between the input terminals, including at least said self-inductance and a switching element which is alternatively switched to a conducting state and a non-conducting state at high frequency. For example, as shown in Exhibit 811 the S29011 contains a second series circuit between the input terminals (*e.g.*, AC MAINS INPUT), including at least said self-inductance (*e.g.*, L1) and a switching element (*e.g.*, Q1) which is alternatively switched to a conducting state and a non-conducting state at high frequency.

130. ~~74.~~ On information and belief, the S29011 contains a third series circuit between the output terminals, including at least said diode and an inductive winding. For example, as shown in Exhibit 811 the S29011 contains a third series circuit between the output terminals (*e.g.*, OUTPUT WIRE CONNECTOR), including at least said diode (*e.g.*, D3) and an inductive winding (*e.g.*, the secondary winding of T1).

131. ~~75.~~ On information and belief, the S29011 further is characterized in that the inductive winding forms a secondary winding of a transformer which has a primary winding which forms part of both the first and the second series circuits. For example, as shown in Exhibit 811 the inductive winding (*e.g.*, the secondary winding of T1) forms a secondary winding of a transformer which has a primary winding which forms part of both the first and the second series circuits.

~~76.~~ On information and belief, the full extent of **Defendant**Satco's infringement is not presently known to Signify. On information and belief, **Defendant**Satco has made and sold, or will make and sell, products under different names or part numbers that infringe the '525 Patent in a similar manner. Signify makes this preliminary identification of infringing products and infringed claims without

the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise. Signify will identify each claim of the '525 Patent that is infringed and each product that Signify is aware of that infringes the '525 Patent in accordance with the Local Patent Rules.

132. ~~77.~~ On information and belief, **Defendant**[Satco](#) has been aware of and has had notice of the '525 Patent and its infringement of the '525 Patent at least as early as ~~the service of this Complaint.~~[November 4, 2019.](#)

133. ~~78.~~ On information and belief, by continuing [to](#) make use, sell, offer to sell, and/or import the '525 Accused Products on or after **Defendant**[Satco](#) first had notice of Signify's allegations of infringement, **Defendant**[Satco](#) indirectly infringes and continues to indirectly infringe at least claim 1 of the '525 Patent by active inducement under 35 U.S.C. § 271(b). **Defendant**[Satco](#) has done so by acts including but not limited to (1) selling such products including features that—when used or resold—infringe, either literally or under the doctrine of equivalents, the '525 Patent; (2) marketing the infringing capabilities of such products; and (3) providing instructions, technical support, and other support and encouragement for the infringing use of such products. Such conduct by **Defendant**[Satco](#) was intended to and results in direct infringement by **Defendant**[Satco](#)'s direct and indirect customers, including the making, using, selling, offering for sale and/or importation of the '525 Accused Products in the United States. **Defendant**[Satco](#) has performed and continues to perform these affirmative acts with knowledge of the '525 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '525 Patent.

~~79.~~ On information and belief, by continuing make, use, sell, offer to sell, and/or import the '525 Accused Products on or after **Defendant**[Satco](#) first had notice of Signify's allegations of infringement, **Defendant**[Satco](#) indirectly infringes and continues to indirectly infringe at least

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'525 Patent by contributorily infringing under 35 U.S.C. § 271(c). **Defendant Satco**'s affirmative acts of manufacturing, selling, offering for sale, and/or importing the '525 Accused Products, in this District and elsewhere in the United States, contribute to **Defendant Satco**'s customers and end-users directly infringing of the '525 Accused Products. The '525 Accused Products are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by **Defendant Satco** to be especially made or especially adapted for use in infringement of the '525 Patent. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '525 Patent and with intent, or willful blindness, that they cause the direct infringement of the '525 Patent.

134. ~~80.~~ On information and belief, Signify has suffered and continues to suffer damages as a result of **Defendant Satco**'s infringement of the '525 Patent in an amount to be determined at trial.

135. ~~81.~~ On information and belief, **Defendant Satco**'s infringement of the '525 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless **Defendant Satco** is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '525 Patent.

136. ~~82.~~ On information and belief, **Defendant Satco** has continued with its infringement despite the objectively high likelihood that its actions constitute infringement and **Defendant Satco**'s subjective knowledge of this obvious risk. As **Defendant Satco** has no good faith belief that it does not infringe the '525 Patent, at least **Defendant Satco**'s continued infringement of the '525 Patent is willful and deliberate, entitling Signify to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

#### **COUNT FOUR** **TENTH COUNTERCLAIM**



137. ~~83.~~ Signify incorporates by reference the allegations set forth in the preceding paragraphs as though fully set forth herein.

138. ~~84.~~ On information and belief, **Defendant** Satco has infringed and is infringing claims of the '328 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products, including, but not limited to, the S9461, S29011, S9312, S9714, S9469, and/or other products with substantially similar features (collectively the "'328 Accused Products").

139. ~~85.~~ Claim 1 of the '328 Patent recites:

1. An LED downlight fixture, comprising:

an array of LEDs in thermal connectivity with a heatsink, said array of LEDs positioned adjacent a first aperture of a multi-piece reflector assembly;

said multi-piece reflector assembly including:

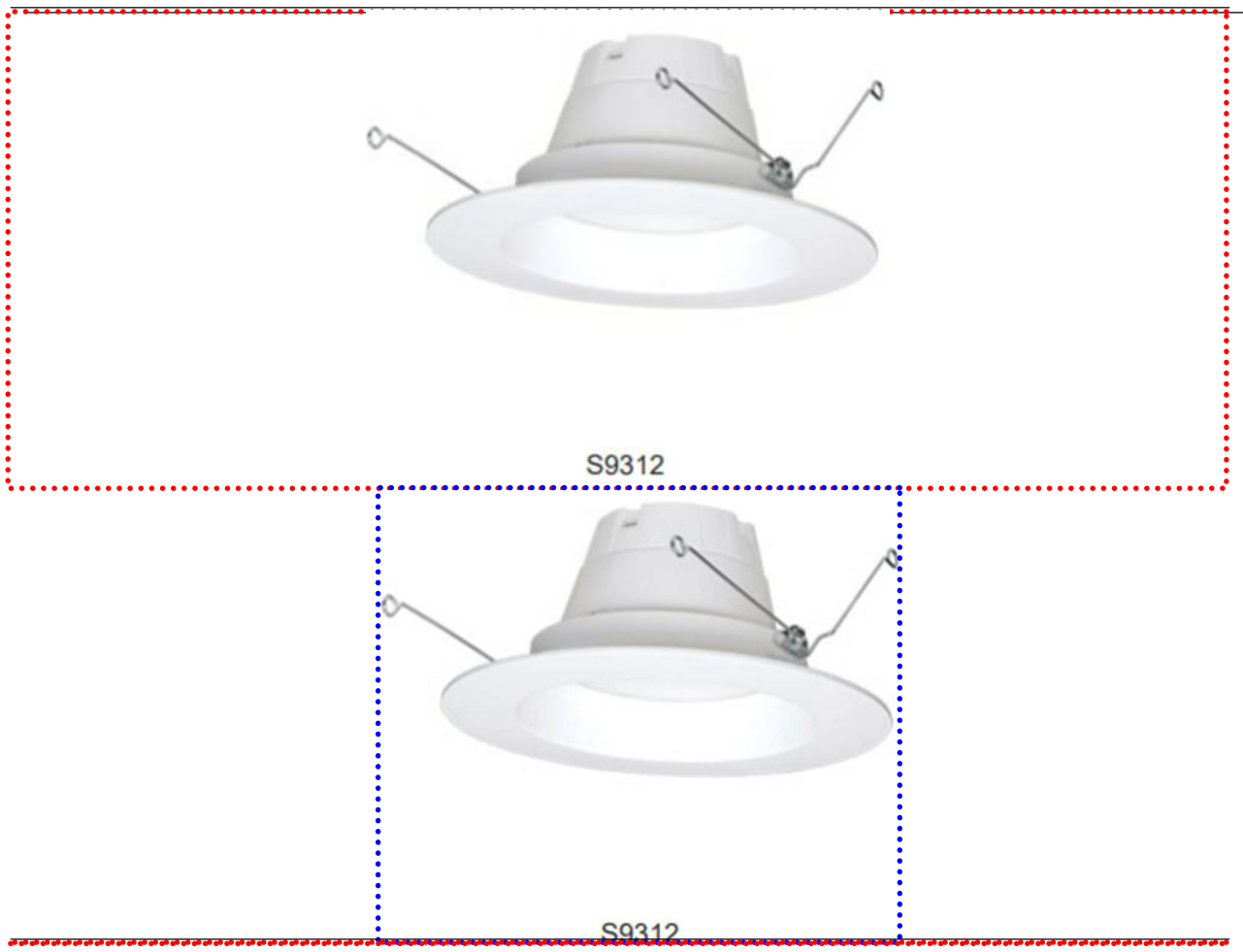
a first reflector having said first aperture disposed in an upper portion of said first reflector and an opposed larger second aperture in a lower portion of said first reflector;

a second reflector having a first aperture positioned adjacent said second aperture of said first reflector and a second aperture opposite said first aperture of said second reflector and defining a light exit passageway;

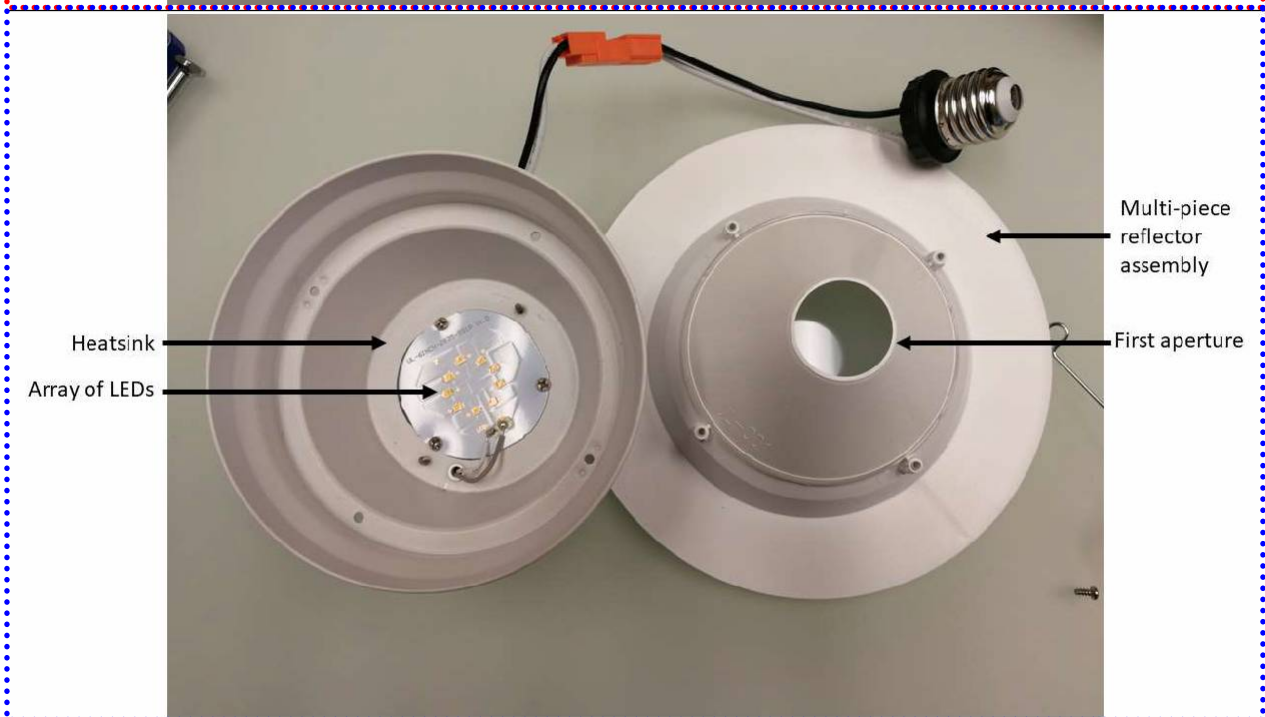
a diffuser positioned proximal to and extending across said second aperture of said first reflector and said first aperture of said second reflector.

140. ~~86.~~ On information and belief, the S9312 is an LED downlight fixture. For example, this limitation is shown below.



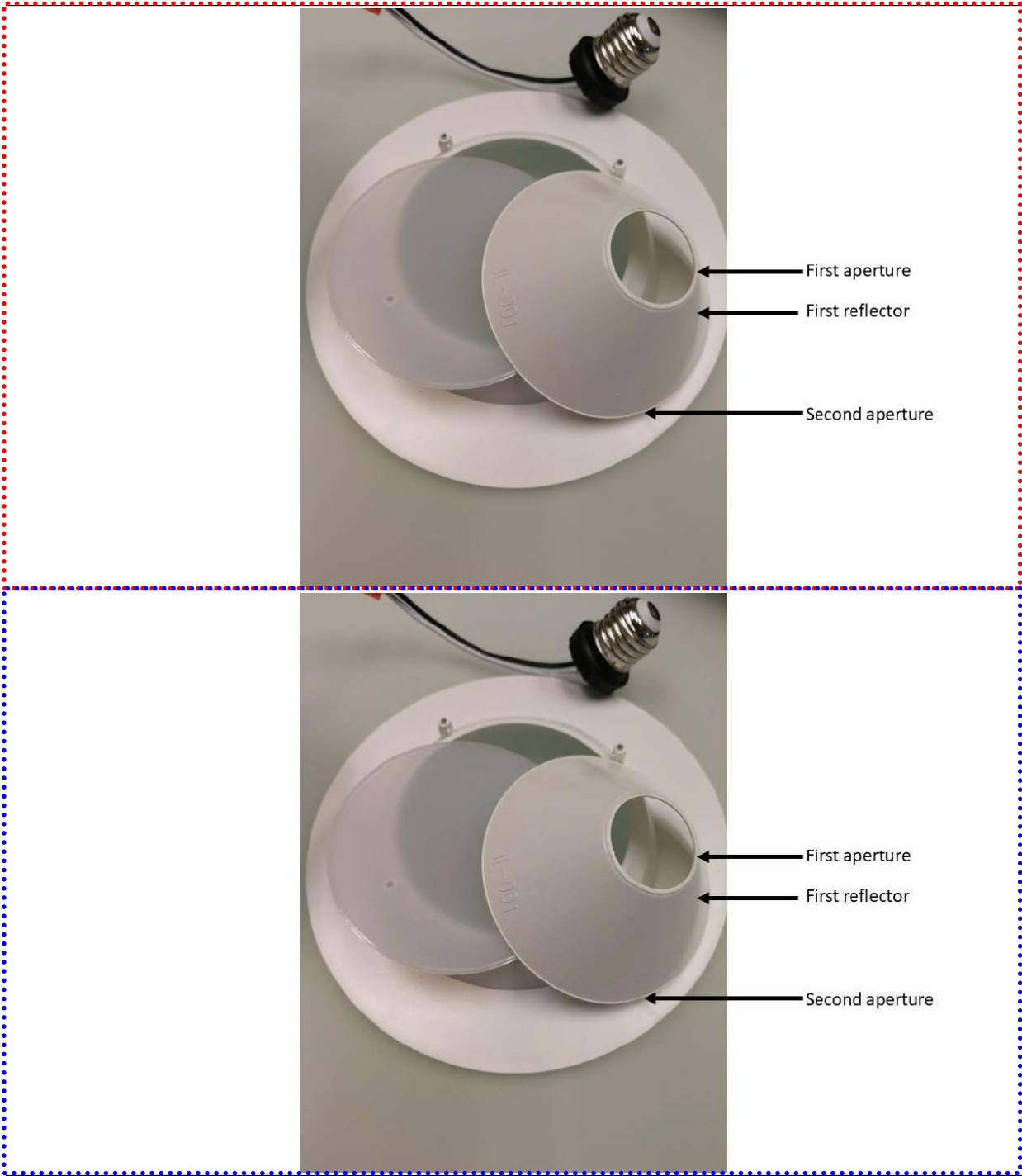


141. ~~87.~~ On information and belief, the S9312 comprises an array of LEDs in thermal connectivity with a heatsink, said array of LEDs positioned adjacent a first aperture of a multi-piece reflector assembly. For example, this limitation is shown below.



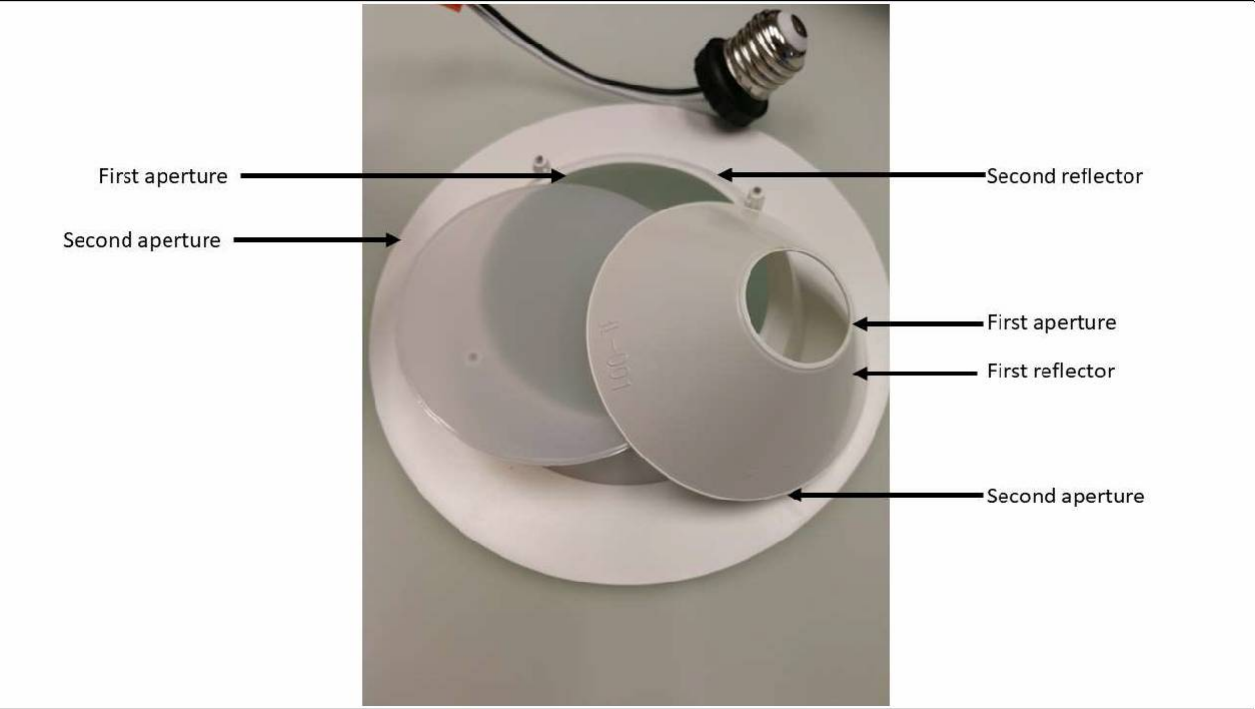
142. ~~§§.~~ On information and belief, the S9312 comprises a multi-piece reflector assembly including a first reflector having said first aperture disposed in an upper portion of said first

reflector and an opposed larger second aperture in a lower portion of said first reflector. For example, this limitation is shown below.

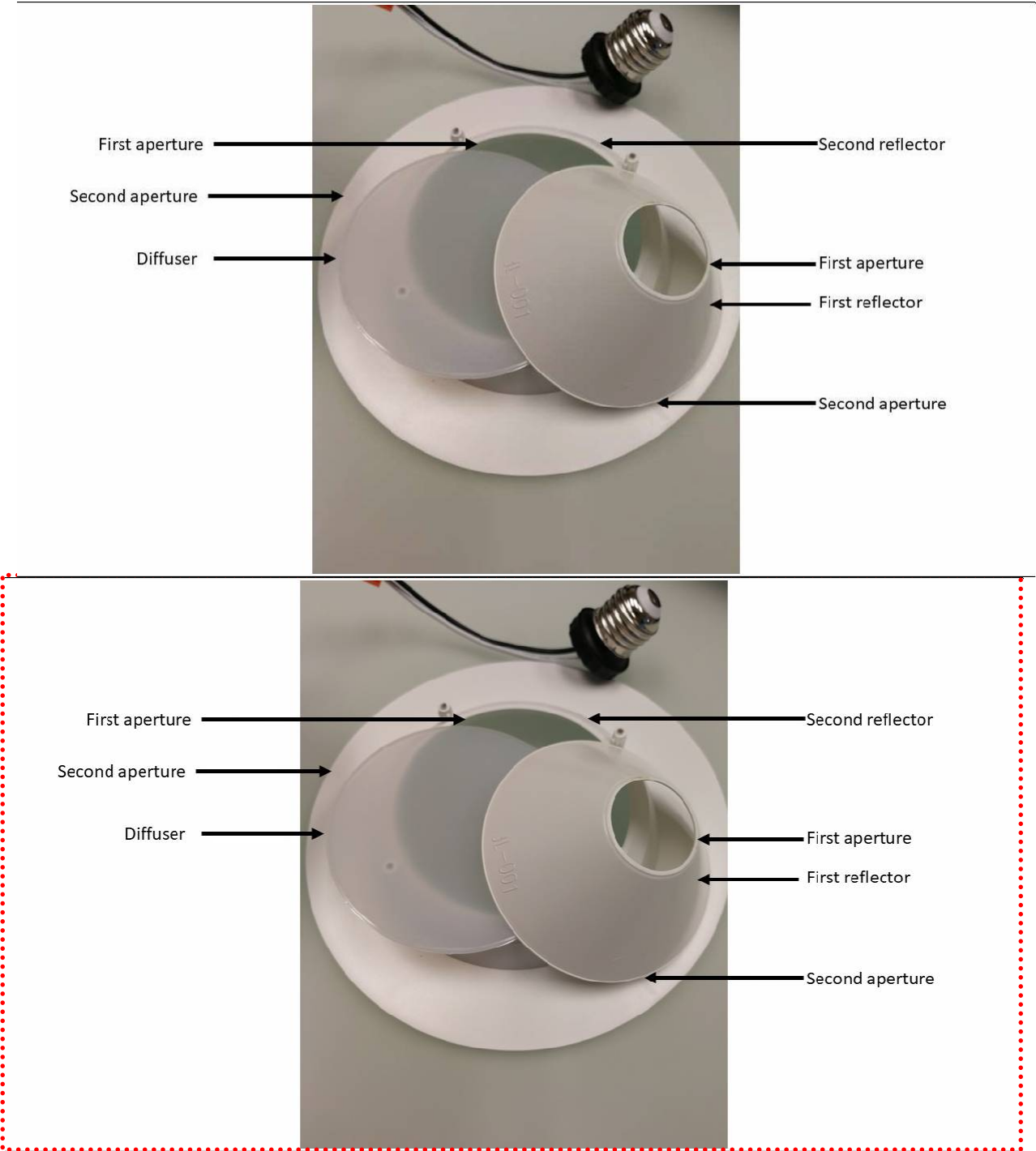


143. ~~89.~~ On information and belief, the S9312 comprises a multi-piece reflector assembly including a second reflector having a first aperture positioned adjacent said second aperture of said first reflector and a second aperture opposite said first aperture of said second reflector and

defining a light exit passageway. For example, this limitation is shown below.



144. ~~90.~~ On information and belief, the S9312 comprises a diffuser positioned proximal to and extending across said second aperture of said first reflector and said first aperture of said second reflector. For example, this limitation is shown below.



145. 91. The full extent of **Defendant**[Satco](#)'s infringement is not presently known to Signify. On information and belief, **Defendant**[Satco](#) has made and sold, or will make and sell, products under different names or part numbers that infringe the '328 Patent in a similar manner. Signify makes this preliminary identification of infringing products and infringed claims without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained

through discovery or otherwise. Signify will identify each claim of the '328 Patent that is infringed and each product that Signify is aware of that infringes the '328 Patent in accordance with the Local Patent Rules.

146. ~~92.~~ On information and belief, ~~Defendant~~Satco has been aware of and has had notice of the '328 Patent and its infringement of the '328 Patent at least as early as September 21, 2017. On September 21, 2017, Signify, then known as Philips Lighting, filed a Complaint with the United

States International Trade Commission, which included claim charts detailing **Defendant Satco**'s infringement of the '328 patent.

147. ~~93.~~ On information and belief, by making, using, selling, offering to sell, and/or importing the '328 Accused Products on or after **Defendant Satco** first had notice of Signify's allegations of infringement, **Defendant Satco** indirectly infringed and continues to indirectly infringe at least claim 1 of the '328 Patent by active inducement under 35 U.S.C. § 271(b). **Defendant Satco** has done so by acts including but not limited to (1) selling such products including features that—when used or resold—infringe, either literally or under the doctrine of equivalents, the '328 Patent; (2) marketing the infringing capabilities of such products; and (3) providing instructions, technical support, and other support and encouragement for the infringing use of such products. Such conduct by **Defendant Satco** was intended to and results in direct infringement by **Defendant Satco**'s direct and indirect customers, including the making, using, selling, offering for sale and/or importation of the '328 Accused Products in the United States. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '328 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '328 Patent.

~~94.~~ On information and belief, by making, using, selling, offering to sell, and/or importing the '328 Accused Products on or after **Defendant Satco** first had notice of Signify's allegations of infringement, **Defendant Satco** indirectly infringed and continues to indirectly infringe at least claim 1 of the '328 Patent by contributorily infringing under 35 U.S.C. § 271(c). **Defendant Satco**'s affirmative acts of manufacturing, selling, offering for sale, and/or importing the '328 Accused Products, in this District and elsewhere in the United States, contribute to **Defendant Satco**'s customers and end-users directly infringing of the '328 Accused Products. The '328 Accused Products are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by **Defendant Satco** to be

especially made or especially adapted for use in infringement of the '328 Patent. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '328 Patent and with intent, or willful blindness, that they cause the direct infringement of the '328 Patent.

148. ~~95.~~ On information and belief, Signify has suffered and continues to suffer damages as a result of **Defendant Satco**'s infringement of the '328 Patent in an amount to be determined at trial.

149. ~~96.~~ On information and belief, **Defendant Satco**'s infringement of the '328 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless **Defendant Satco** is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '328 Patent.

150. ~~97.~~ On information and belief, **Defendant Satco** has continued with its infringement despite the objectively high likelihood that its actions constitute infringement and **Defendant Satco**'s subjective knowledge of this obvious risk. As **Defendant Satco** has no good faith belief that it does not infringe the '328 Patent, at least **Defendant Satco**'s continued infringement of the '328 Patent is willful and deliberate, entitling Signify to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**COUNT FIVE**  
**ELEVENTH COUNTERCLAIM**

**(Infringement of U.S. Patent No. 7,352,138)**

151. ~~98.~~ Signify incorporates by reference the allegations set forth in the preceding paragraphs as though fully set forth herein.

~~99.~~ On information and belief, **Defendant Satco** has infringed and is infringing claims of the '138 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products, including, but not limited to the



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S8922, S8950, S8951, S8952, S8953, S8990, S8993, S9140, S9141, S9142, S9143, S9200, S9201, S9202, S9203, S9312, ~~S9333~~, S9380, S9381, S9382, S9383, S9384, S9385, S9386, S9387, S9388, S9389, S9452, S9460, S9461, S9463, S9468, S9469, S9470, S9471, S9472, S9473, S9474, S9475, S9477, S9478, S9479, S9560, S9561, S9562, S9563, S9564, S9565, S9566, S9567, S9568, S9569, S9570, S9571, S9572, S9574, S9575, S9576, S9577, S9578, S9579, S9580, S9581, S9582, S9583, S9584, S9585, S9588, S9614, S9618, S9619, S9620, S9621, S9622, S9623, S9624, S9625, S9626, S9627, S9630, S9631, S9632, S9633, S9698, S9703, S9704, S9707, S9708, S9713, S9714, S9715, S9716, S9724, S9727, S9729, S9740, S9743, S9745, S9824, S9825, S9826, S9827, S9828, S9845, S9846, S9874, S9875, S9876, S9892, S9894, and S9895, and/or other products with substantially similar circuitry (collectively, the “138 Accused Products”).

152. ~~100.~~ Claim 1 of the '138 Patent recites:

1. An illumination apparatus, comprising:

at least one LED;

and at least one controller coupled to the at least one LED and configured to receive a power-related signal from an alternating current (A.C.) power source that provides signals other than a standard A.C. line voltage, the at least one controller further configured to provide power to the at least one LED based on the power-related signal.

153. ~~101.~~ On information and belief, the S9461 is an illumination apparatus. For example, an image of the S9461 is provided below.



154. ~~102.~~ On information, for example, as shown in Exhibit 912, the S9461 comprises the at least one LED (e.g., LED1 to LED12).

155. ~~103.~~ On information, coupled to the at least one alternating current (A.C.) power source, the at least one controller



the at least one LED. For example, as shown in Exhibit 912, the S9461 comprises the at least one LED (e.g., LED1 to LED12). The at least one controller is configured to receive a power-related signal from an alternating current (A.C.) power source other than a standard A.C. line voltage, the at least one controller is configured to provide power to the at least one LED based on the power-related signal.

based on the power-related signal. For example, as shown in Exhibit 912 the S9461 comprises the at least one controller (e.g., including at least in part the iW3605 IC identified as U1) coupled to the at least one LED (e.g., LED1 to LED12), and configured to receive a power-related signal (e.g., a phase-cut dimming signal) from an alternating current (A.C.) power source (e.g., a dimmer) that provides signals other than a standard A.C. line voltage (e.g., a phase-cut dimming signal), the at least one controller (e.g., U1) further configured to provide power to the at least one LED (e.g., LED1 to LED12) based on the power-related signal.

~~104.~~ The full extent of **Defendant** [Satco](#)'s infringement is not presently known to Signify. On information and belief, **Defendant** [Satco](#) has made and sold, or will make and sell, products under different names or part numbers that infringe the '138 Patent in a similar manner. Signify makes this

preliminary identification of infringing products and infringed claims without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise. Signify will identify each claim of the '138 Patent that is infringed and each product that Signify is aware of that infringes the '138 Patent in accordance with the Local Patent Rules.

156. ~~105.~~ On information and belief, **Defendant Satco** has been aware of and has had notice of the '138 Patent and its infringement of the '138 Patent at least as early as November 13, 2014. On November 13, 2014, **Defendant Satco** was provided a list of claims and exemplary products that infringe the '138 Patent. On November 25, 2014, **Defendant Satco** was provided with a claim chart detailing **Defendant Satco**'s infringement of the '138 patent.

~~106.~~ On information and belief, by making, using, selling, offering to sell, and/or importing the '138 Accused Products on or after **Defendant Satco** first had notice of Signify's allegations of infringement, **Defendant Satco** indirectly infringed and continues to indirectly infringe at least claim 1 of the '138 Patent by active inducement under 35 U.S.C. § 271(b). **Defendant Satco** has done so by acts including but not limited to (1) selling such products including features that—when used or resold—infringe, either literally or under the doctrine of equivalents, the '138 Patent; (2) marketing the infringing capabilities of such products; and (3) providing instructions, technical support, and other support and encouragement for the infringing use of such products. Such conduct by **Defendant Satco** was intended to and results in direct infringement by **Defendant Satco**'s direct and indirect customers, including the making, using, selling, offering for sale and/or importation of the '138 Accused Products in the United States. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of

the '138 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '138 Patent.

157. ~~107.~~ On information and belief, by making, using, selling, offering to sell, and/or importing the '138 Accused Products on or after **DefendantSatco** first had notice of Signify's allegations of infringement, **DefendantSatco** indirectly infringed and continues to indirectly infringe at least claim 1 of the '138 Patent by contributorily infringing under 35 U.S.C. § 271(c). **DefendantSatco**'s affirmative acts of manufacturing, selling, offering for sale, and/or importing the '138 Accused Products, in this District and elsewhere in the United States, contribute to **DefendantSatco**'s customers and end-users directly infringing of the '138 Accused Products. The '138 Accused Products are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by **DefendantSatco** to be especially made or especially adapted for use in infringement of the '138 Patent. **DefendantSatco** has performed and continues to perform these affirmative acts with knowledge of the '138 Patent and with intent, or willful blindness, that they cause the direct infringement of the '138 Patent.

158. ~~108.~~ On information and belief, Signify has suffered and continues to suffer damages as a result of **DefendantSatco**'s infringement of the '138 Patent in an amount to be determined at trial.

159. ~~109.~~ On information and belief, **DefendantSatco**'s infringement of the '138 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless **DefendantSatco** is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '138 Patent.

~~110.~~ On information and belief, **DefendantSatco** has continued with its infringement despite the objectively high likelihood that its actions constitute infringement and **DefendantSatco**'s subjective knowledge of this obvious risk. As **DefendantSatco** has no good faith belief that it does not infringe the '138 Patent, at least **DefendantSatco**'s continued infringement of the '138

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Signify to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**COUNT SIX**  
**T WELTH COUNTERCLAIM**

**(Infringement of U.S. Patent No. 7,038,399)**

160. ~~H1.~~ Signify incorporates by reference the allegations set forth in the preceding paragraphs as though fully set forth herein.

161. ~~H2.~~ On information and belief, **Defendant** Satco has infringed and is infringing claims of the '399 Patent, including at least claim 17, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products, including, but not limited to the S29011, S29056, S29563, S8604, S8607, S8608, S8609, S8610, S8612, S8615, S8616, S8878, S8922, S8950, S8951, S8952, S8953, S8990, S8993, S9140, S9141, S9142, S9143, S9200, S9201, S9202, S9203, S9312, ~~S9333~~, S9380, S9381, S9382, S9383, S9384, S9385, S9386, S9387, S9388, S9389, S9452, S9460, S9461, S9463, S9468, S9469, S9470, S9471, S9472, S9473, S9474, S9475, S9477, S9478, S9479, S9560, S9561, S9562, S9563, S9564, S9565, S9566, S9567, S9568, S9569, S9570, S9571, S9572, S9574, S9575, S9576, S9577, S9578, S9579, S9580, S9581, S9582, S9583, S9584, S9585, S9588, S9614, S9618, S9619, S9620, S9621, S9622, S9623, S9624, S9625, S9626, S9627, S9630, S9631, S9632, S9633, S9698, S9703, S9704, S9707, S9708, S9713, S9714, S9715, S9716, S9724, S9727, S9729, S9740, S9743, S9745, S9824, S9825, S9826, S9827, S9828, S9845, S9846, S9874, S9875, S9876, S9892, S9894, S9895, and/or other products with substantially similar circuitry (collectively, the "'399 Accused Products").

162. ~~H3.~~ Claim 17 of the '399 Patent recites:

17. An illumination apparatus, comprising:  
at least one LED; and

at least one controller coupled to the at least one LED and configured to receive a power-related signal from an alternating current (A.C.) power source that provides signals other than a standard A.C. line voltage, the at least one controller further configured to provide power to the at least one LED based on the power-related signal,

wherein the A.C. power source is an A.C. dimmer circuit,

wherein the A.C. dimmer circuit is controlled by a user interface to vary the power-related signal, and wherein the at least one controller is configured to variably control at least one parameter of light generated by the at least one LED in response to operation of the user interface, and

wherein the at least one controller includes:

an adjustment circuit to variably control the at least one parameter of light based on the varying power-related signal; and

power circuitry to provide at least the power to the at least one LED based on the varying power-related signal.

163. ~~144.~~ On information and belief, the S9461 is an illumination apparatus. For example, an image of the S9461 is provided below.



164. ~~145.~~ On information and belief, the S9461 comprises the at least one LED. For example, as shown in Exhibit ~~9~~,12, the S9461 contains the at least one LED (e.g., LED1 to LED12).



165. ~~116.~~ On information and belief, the S9461 comprises the at least one controller coupled to the at least one LED and configured to receive a power-related signal from an alternating current (A.C.) power source that provides signals other than a standard A.C. line voltage, the at least one controller further configured to provide power to the at least one LED based on the power-related signal. For example, as shown in Exhibit 9,12, the S9461 comprises the at least one controller (e.g., including at least in part the iW3605 IC identified as U1) coupled to the at least one LED (e.g., LED1 to LED12), and configured to receive a power-related signal (e.g., a phase-cut dimming signal) from an alternating current (A.C.) power source (e.g., a dimmer) that provides signals other than a standard A.C. line voltage (e.g., a phase-cut dimming signal), the at least one controller (e.g., U1) further configured to provide power to the at least one LED (e.g., LED1 to LED12) based on the power-related signal.

166. ~~117.~~ On information and belief, the A.C. power source that provides power to the S9461 is an A.C. dimmer circuit. For example, the S9461 is “dimnable.”

Specifications	
Technology	LED
CRI	90
Beam Angle	90
Rated Hours	50000
Operating Temperature	-20C (-4F) to a maximum of +45C (+113F)
Dimmable	Yes - Dimmable

[https://www.satco.com/media/PDF/satco\\_product\\_6465.p  
df](https://www.satco.com/media/PDF/satco_product_6465.pdf)

[h ttps://media.satco.com/specsheetsp/pdf/S9461](https://media.satco.com/specsheets/pdf/S9461)

167. ~~118.~~ Further, the S9461’s compatible dimmers include the following AC dimmer circuits:

S9461	Retro Fit Fixture	9WLED/RDL/4/30K/120V	
	Leviton DSE06-10Z	Lutron DVELV-300P	Lutron MAELV-600
	Lutron NTELV-300	Lutron PD-5NE	Lutron SELV-300P

Type	Brand	Model Number	Website
Dimmer	Leviton	DSE06-10Z	Visit
Dimmer	Lutron	DVELV-300P	Visit
Dimmer	Lutron	MAELV-600	Visit
Dimmer	Lutron	NTELV-300	Visit
Dimmer	Lutron	PD-5NE	Visit
Dimmer	Lutron	SELV-300P	Visit

<https://www.satco.com/s9461.html>

168. ~~119.~~ On information and belief, the A.C. dimmer circuit used with the S9461 is controlled by a user interface to vary the power-related signal, and wherein the at least one controller is configured to variably control at least one parameter of light generated by at least one LED in response to operation of the user interface. For example, as shown in Exhibit ~~9~~12, the S9461's AC dimmer circuit (*e.g.*, phase-cut dimmer circuit) is controlled by a user interface (*e.g.*, dimmer control) to vary the power-related signal.

169. ~~120.~~ On information and belief, the at least one controller of the S9461 includes an adjustment circuit to variably control the at least one parameter of light based on the varying power-related signal. For example, as shown in Exhibit ~~9~~12 the at least one controller (*e.g.*, at least in part U1) of the S9461 includes an adjustment circuit to variably control the at least one parameter of light (*e.g.*, intensity or brightness of light) based on the varying power-related signal.

170. ~~121.~~ On information and belief, at least one controller of the S9461 includes power circuitry to provide at least the power to at least one LED based on the varying power-related signal. For example, as shown in Exhibit ~~9~~12 at least one controller (*e.g.*, U1) of the S9461 includes power circuitry (*e.g.*, a switched-mode power supply) to provide the at least the power to the at least one LED (*e.g.*, LED1 to LED12) based on the varying power-related signal.

~~122.~~ The full extent of **Defendant Satco**'s infringement is not presently known to Signify. On information and belief, **Defendant Satco** has made and sold, or will make and sell, products under different names or part numbers that infringe the '399 Patent in a similar manner. Signify makes this preliminary identification of infringing products and infringed claims without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise. Signify will identify each claim of the '399 Patent that is infringed and each product that Signify is aware of that infringes the '399 Patent in accordance with the Local Patent Rules.

171. ~~123.~~ On information and belief, **Defendant Satco** has been aware of and has had notice of the '399 Patent and its infringement of the '399 Patent at least as early as November 13, 2014. On November 13, 2014, **Defendant Satco** was provided a list of claims and exemplary products that infringe the '399 Patent. On November 25, 2014, **Defendant Satco** was provided with a claim chart detailing **Defendant Satco**'s infringement of the '399 patent. Further, on September 21, 2017, Signify, then known as Philips Lighting, filed a Complaint with the United States International Trade Commission, which included claim charts detailing **Defendant Satco**'s infringement of the '399 patent.

172. ~~124.~~ On information and belief, by making, using, selling, offering to sell, and/or importing the '399 Accused Products on or after **Defendant Satco** first had notice of Signify's allegations of infringement, **Defendant Satco** indirectly infringed and continues to indirectly infringe at least claim 17 of the '399 Patent by active inducement under 35 U.S.C. § 271(b). **Defendant Satco** has done so by acts including but not limited to (1) selling such products including features that—when used or resold—infringe, either literally or under the doctrine of equivalents, the '399 Patent; (2) marketing the infringing capabilities of such products; and (3) providing instructions, technical support, and

other support and encouragement for the infringing use of such products. Such conduct by **Defendant Satco** was intended to and results in direct infringement by **Defendant Satco**'s direct and indirect customers, including the making, using, selling, offering for sale and/or importation of the '399 Accused Products in the United States. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '399 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '399 Patent.

173. ~~125.~~ On information and belief, by making, using, selling, offering to sell, and/or importing the '399 Accused Products on or after **Defendant Satco** first had notice of Signify's allegations of infringement, **Defendant Satco** indirectly infringed and continues to indirectly infringe at least claim 17 of the '399 Patent by contributorily infringing under 35 U.S.C. § 271(c). **Defendant Satco**'s affirmative acts of manufacturing, selling, offering for sale, and/or importing the '399 Accused Products, in this District and elsewhere in the United States, contribute to **Defendant Satco**'s customers and end-users directly infringing the '399 Accused Products. The '399 Accused Products are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by **Defendant Satco** to be especially made or especially adapted for use in infringement of the '399 Patent. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '399 Patent and with intent, or willful blindness, that they cause the direct infringement of the '399 Patent.

174. ~~126.~~ On information and belief, Signify has suffered and continues to suffer damages as a result of **Defendant Satco**'s infringement of the '399 Patent in an amount to be determined at trial.

175. ~~127.~~ On information and belief, **Defendant Satco**'s infringement of the '399 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless **Defendant Satco** is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '399 Patent.

~~128.~~ On information and belief, **Defendant** Satco has continued with its infringement despite the objectively high likelihood that its actions constitute infringement and **Defendant** Satco's subjective knowledge of this obvious risk. As **Defendant** Satco has no good faith belief that it does not infringe the '399 Patent, at least **Defendant** Satco's continued infringement of the '399 Patent is willful and deliberate, entitling Signify to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**COUNT SEVEN**  
**T HIRTEENTH COUNTERCLAIM**

**(Infringement of U.S. Patent No. 7,256,554)**

176. ~~129.~~ Signify incorporates by reference the allegations set forth in the preceding paragraphs as though fully set forth herein.

177. ~~130.~~ On information and belief, **Defendant** Satco has infringed and is infringing claims of the '554 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products, including, but not limited to the S29011, S8922, S8993, S29056, and/or other products with substantially similar circuitry, (collectively, the "'554 Accused Products").

178. ~~131.~~ On information and belief, **Defendant** Satco has directly infringed and is directly infringing claim 1 of the '554 patent by making, using, offering to sell, selling, and/or importing dimmable LED Lighting Devices such as the '554 Accused Products. The S29056, a '554 Accused Product, was reverse engineered and the resulting schematics are attached as Exhibit ~~10.~~ 13.

179. ~~132.~~ Claim 1 of the '554 Patent recites:

1. An apparatus, comprising:

at least one first LED configured to generate first radiation having a first spectrum; and

a first feed-forward driver coupled to the at least one first LED and configured to controllably vary a first intensity of the first radiation

without monitoring or regulating a first voltage or a first current provided to the at least one first LED and without optically monitoring the first radiation, wherein the first feed-forward driver comprises: at least one energy transfer element to store input energy derived from a power source and to provide output energy to the at least one first LED; and

at least one switch coupled to the at least one energy transfer element to control at least the input energy stored to the at least one energy transfer element.

180. ~~133.~~ On information and belief, each of the '554 Accused Products is an apparatus.

181. ~~134.~~ On information and belief, each of the '554 Accused Products includes the at least one first LED configured to generate first radiation having a first spectrum; for example, each '554 Accused Product includes the at least one LED light source configured to generate light characterized by radiation in the visible spectrum, as indicated ~~the~~ at least by a color temperature value of these products (*e.g.* 3000K for the S29056).

182. ~~135.~~ On information and belief, each '554 Accused Product includes a first feed-forward driver coupled to the at least one first LED. For example, the S29056 includes a feed-forward driver (*e.g.*, including circuitry comprising transformer T1, transistor Q1, and diode D3) coupled to the at least one LED light source (*e.g.*, through the LED+/LED- output wire connector).

183. ~~136.~~ On information and belief, the first feed-forward driver in each '554 Accused Product is configured to controllably vary a first intensity of the first radiation without monitoring or regulating a first voltage or a first current provided to the at least one first LED and without optically monitoring the first radiation. For example, the feed-forward driver in each '554 Accused Product is configured to variably control the intensity of the light of at least one LED light source based on a varying phase-cut AC signal from a phase-cut AC dimmer, without monitoring or regulating the voltage or current provided to the at least one LED light source and without optically monitoring the light generated by the LED light source—the feed-forward driver in each '554

Accused Product monitors only signals on the “primary” side of the circuit and is not configured to receive any feedback from the output to the LED light source on the “secondary” side of the circuit.

184. ~~137.~~ On information and belief, the first feed-forward driver in each '554 Accused Product includes the at least one energy transfer element to store input energy derived from a power source and to provide output energy to the at least one first LED. For example, the feed-forward driver in the S29056 includes transformer T1 to store input energy from a power source (*e.g.*, input power from an AC dimmer) and to provide output energy to the at least one LED light source (*e.g.*, through the LED+/LED- output wire connector).

185. ~~138.~~ On information and belief, the first feed-forward driver in each '554 Accused Product includes the at least one switch coupled to the at least one energy transfer element to control the at least the input energy stored to at least one energy transfer element. For example, the feed-forward driver in the S29056 includes a switch (transistor Q1) coupled to the at least one energy transfer element (transformer T1) and when transistor Q1 is on current flows through the primary winding of transformer T1 and the transformer T1 stores energy.

186. ~~139.~~ The full extent of **Defendant**Satco's infringement is not presently known to Signify. On information and belief, **Defendant**Satco has made and sold, or will make and sell, products under different names or part numbers that infringe the '554 Patent in a similar manner. Signify makes this preliminary identification of infringing products and infringed claims without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise. Signify will identify each claim of the '554 Patent that is infringed and



each product that Signify is aware of that infringes the '554 Patent in accordance with the Local Patent Rules.

~~140.~~ **Defendant** Satco has been aware of and has had notice of the '554 Patent and its infringement of the '554 Patent at least as early as November 13, 2014. On November 13, 2014, **Defendant** Satco was provided a list of claims and exemplary products that are infringe the '554 Patent. On November 25, 2014, **Defendant** Satco was provided with a claim chart detailing **Defendant** Satco's infringement of the '554 Patent. Further, on September 21, 2017, Signify, then known as Philips Lighting, filed a Complaint with the United States International Trade Commission. During this investigation, Signify served claim charts detailing infringement by Satco of the '554 Patent.

187. ~~141.~~ On information and belief, by making, using, selling, offering to sell, and/or importing the '554 Accused Products on or after **Defendant** Satco first had notice of Signify's allegations of infringement, **Defendant** Satco indirectly infringed and continues to indirectly infringe at least claim 1 of the '554 Patent by active inducement under 35 U.S.C. § 271(b). **Defendant** Satco has done so by acts including but not limited to (1) selling such products including features that—when used or resold—infringe, either literally or under the doctrine of equivalents, the '554 Patent; (2) marketing the infringing capabilities of such products; and (3) providing instructions, technical support, and other support and encouragement for the infringing use of such products. Such conduct by **Defendant** Satco was intended to and results in direct infringement by **Defendant** Satco's direct and indirect customers, including the making, using, selling, offering for sale and/or importation of the '554 Accused Products in the United States. **Defendant** Satco has performed and continues to perform these affirmative acts with knowledge of the '554 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '554 Patent.

~~142.~~ On information and belief, by making, using, selling, offering to sell, and/or importing the '554 Accused Products on or after **Defendant Satco** first had notice of Signify's allegations of infringement, **Defendant Satco** indirectly infringed and continues to indirectly infringe at least claim 1 of the '554 Patent by contributorily infringing under 35 U.S.C. § 271(c). **Defendant Satco**'s affirmative acts of manufacturing, selling, offering for sale, and/or importing the '554 Accused Products, in this District and elsewhere in the United States, contribute to **Defendant Satco**'s customers and end-users directly infringing the '554 Accused Products. The '554 Accused Products are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by **Defendant Satco** to be especially made or especially adapted for use in infringement of the '554 Patent. **Defendant Satco** has performed and continues to perform these affirmative acts with knowledge of the '554 Patent and with intent, or willful blindness, that they cause the direct infringement of the '554 Patent.

188. ~~143.~~ On information and belief, Signify has suffered and continues to suffer damages as a result of **Defendant Satco**'s infringement of the '554 Patent in an amount to be determined at trial.

189. ~~144.~~ On information and belief, **Defendant Satco**'s infringement of the '554 Patent is causing irreparable harm for which Signify has no adequate remedy at law unless **Defendant Satco** is enjoined by this Court. Under 35 U.S.C. § 283, Signify is entitled to a permanent injunction against further infringement of the '554 Patent.

190. ~~145.~~ On information and belief, **Defendant Satco** has continued with its infringement despite the objectively high likelihood that its actions constitute infringement and **Defendant Satco**'s subjective knowledge of this obvious risk. As **Defendant Satco** has no good faith belief that it does not infringe the '554 Patent, at least **Defendant Satco**'s continued infringement of the '554 Patent is willful and deliberate, entitling Signify to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under

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